CDF Operations

- **Store Summary**
- **Access Work**
- **Modifying FTMs**
- **Summary**

Store Summary

Date	Store	Dur	Init L	Int L	Live L	Eff	Comments
4/7	2402	20.8	32.0	1406.1	1103.7	78.5%	Stack lost - test runs for last 4 hours of the store
4/9	2411	12.5	30.5	911.3	679.1	74.5%	Lost first 1h 45m of store due to L3 problems
4/11	2420	18.3	28.0	1047.2	866.8	82.8%	Lost 30 minutes when proton losses went up to 100kHz
4/12	2422	19.5	30.7	1334.7	1202.3	90.1%	Lost first 35 minutes due to L3 problems
4/13	2424	18.1	36.2	1486.7	1202.2	80.9%	COT SL8 HV trip, Silicon ISL HV trip
	Totals			6186.0	5054.1	81.7%	2h 20m average shot setup, losses below 10kHz

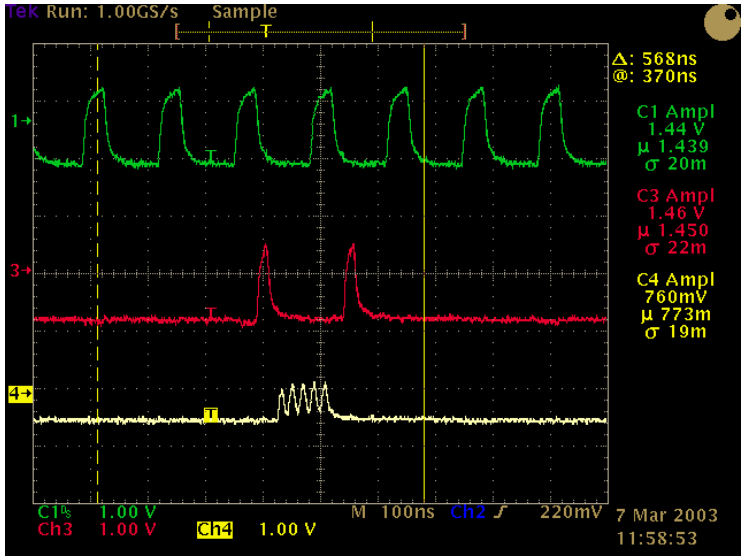
Access Work

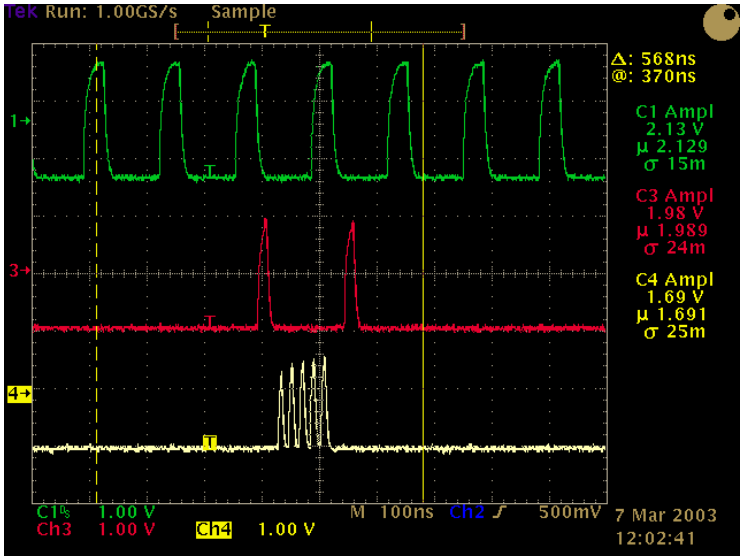
- **Controlled Access 4/9 for Silicon**
  - Replaced power supply for SB1W11L3
  - Buffed 2 FTMs for SB3W2/3 & IB2W0/1
- **Supervised Access 4/10**
  - Silicon completed buffing FTMs for 2 (of 8) crates
  - Maintenance work on Calorimeter, Muon, & Time of Flight
- **Controlled Access 4/12**
  - Silicon buffed 3 FTMs
  - Replaced 2 TDCs for COT SL7

Why Modify FTMs?

- **FTMs are transition modules for Fiber Interface Boards**
- **11 of 12 wire bond failures on the Silicon Detector have been due to high occupancy caused by**
  - Receiving a 5th level 1 accept
  - Missing the control signal (PRD2) free a level 1 buffer
  - Missing the clock edge to latch the PRD2 signal
- **Differential transmission lines for these signals are driven by chips on the FTM whose output is controlled by resistors and jumpers**
- **The problem has been observed and fixed in a teststand by buffing the output of the driver chips**

FTM Signals





- **Unbuffed and buffed control signals**
- **In last 8 weeks, no problems on modified FTMs**
- **There are 33 of 58 FTMs which still need to be modified**
- **Plan to take advantage of any access opportunity >1.5h**
  - 1 hour of overhead and checkout
  - 15 mins to modify each board

Summary

- **Recorded 5pb-1 of 6.1pb-1 delivered with 5 shifts of studies and 1 shift supervised access**
- **Efficiency 81.7% - low due DAQ and HV problems**
  (In part due 16 cdf scientists absent at River to River Relay Run)
- **Work is proceeding to modify FTMs to improve the longterm safety of Silicon Detector**